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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,532	07/07/2003	David H. McFadden	54330/322597	9062
23370	7590	09/27/2007		
JOHN S. PRATT, ESQ KILPATRICK STOCKTON, LLP 1100 PEACHTREE STREET ATLANTA, GA 30309			EXAMINER COCKS, JOSIAH C	
			ART UNIT 3749	PAPER NUMBER
			MAIL DATE 09/27/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/614,532

Applicant(s)

MCFADDEN, DAVID H.

Examiner

Josiah Cocks

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 95-116 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 95-116 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 11, 2007 has been entered.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 95-109** are rejected under 35 U.S.C. 102(b) as being anticipated by **U.S. Patent No. 4,409,453 to Smith** ("Smith").

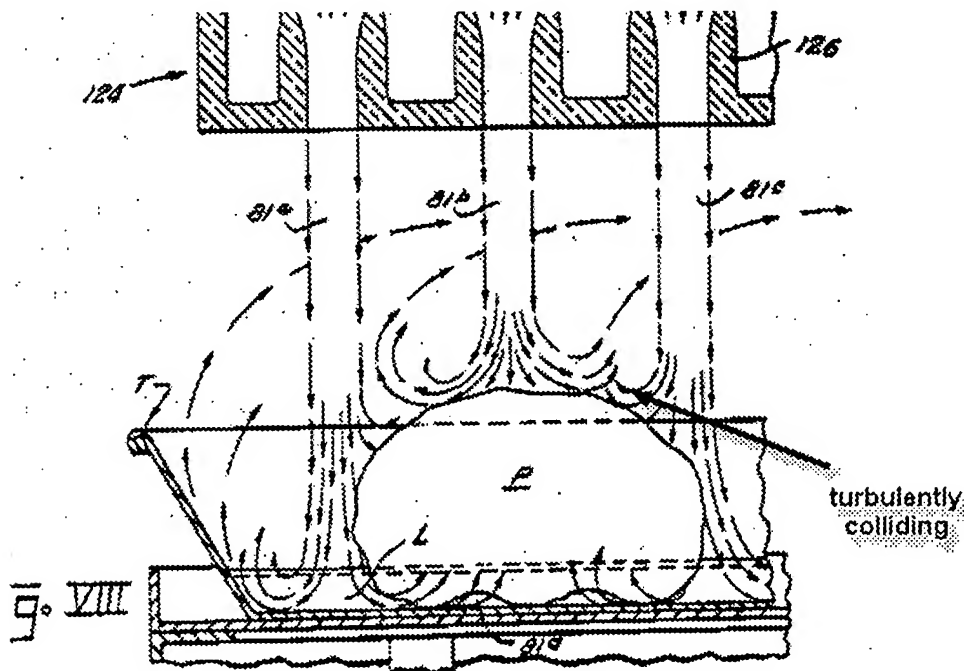
Smith discloses in the specification and figures 1-18 an invention in the same field of endeavor as applicant's invention and as described in applicant's claims 95-109 (note the figures in Smith are disclosed with roman numerals but have been reference below using corresponding numbers 1-18).

In particular, in regard to at least claim 95, Smith shows a system and method of speed cooking a food product with gas comprising the steps of: providing a housing (1) defining a

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cooking chamber, providing a first means (any one of 80, Figs. 2 and 3 or 124, Fig. 8) for directing gas within the cooking chamber and a second means (any other adjacent nozzle/opening 80, Figs. 2 and 3 or 124, Fig. 8). Each of openings (80 or 124) is disposed above the food product for directing gas above the food product. Gas from the openings is provided in the form of jets (81). As shown particular in Fig. 8, a first gas jet (81b) and a second gas jet (81c) are provided to strike a food product (P) and are considered to collide turbulently in close proximity to a surface of the food product to desirably enable "very rapid heat transfer and very rapid water vapor removal from the surface of the product" (see col. 10, lines 45-51). The following is a segment of Fig. 8 of Smith to further illustrate what the examiner considers to be "turbulently colliding" gas flows:

**Segment of Fig. 8 of Smith**  
(the examiner has added lead arrow and text)



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Further, the examiner notes that Smith expressly describes that jets (81), when striking a solid surface will be transformed, into a “turbulent mushroom shaped pressure area” (see col. 11, lines 6-11). While this discussion is in the context of the jets striking the bottom of the food product, the examiner considers that a person of ordinary skill in the art would recognize that the “turbulent mushroom shaped pressure area” would also result on the top of the food product (as shown for instance in Fig. 8 of Smith).

In regard to at least claim 96, see heating elements (50).

In regard to at least claims 97, 100, 102, 103, 107, and 108, flow means (30) for controlling the air flow is described as a “variable speed motor” (see col. 6, lines 4-9) and the velocity of the jets (81) may be optimized (see col. 9, lines 9-15), which is regarded as the recited “adjustably damping”, for controlling the heating of the food to provide “very rapid heat transfer” (col. 10, lines 47-48).

In regard to at least claim 98, at least Fig. 8 of Smith suggests multiple impingement points of the air and food product causing “simultaneously colliding the gas at multiple locations about the selected surfaces of the food product” as recited (see at least col. 10, lines 45-56).

In regard to at least claim 99, see at least Figs. 2 and 8 and note that air is provided to the cooking chamber via conduits (chambers above plates 82 or 122) and exhausted from the cooking chamber (note arrows in each Fig showing air passed from the cooking chamber).

In regard to at least claim 101, as shown in Fig. 6, multiple lower tubes (90) are arranged below a food product (112) forming third and fourth means for directing gas. These tubes direct jets of air (81) to strike the lower surface of the food product (112). The jets of air from adjacent tubes are considered to collide in close proximity to a surface of the food product as recited.

In regard to at least claims 104, 105 and 106, jet (81) velocity is in a range between 500 and 7,000 feet per minute (see col. 9, lines 5-6) meeting applicant's recited ranges.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 110-116** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

**Patent No. 4,409,453 to Smith ("Smith")** in view of U.S. **Patent No. 5,166,487 to Hurley et al. ("Hurley")**.

Smith discloses substantially all the limitations of claims 110-116 (note discussion of this reference above) with the possible exception of directing microwave energy from the opposing side of the cooking chamber. In Smith, while it is anticipated that a microwave energy generator will be used in conjunction with the heated jets (see at least col. 7, lines 3-21), Smith appears to only suggest the use of a single microwave energy generator.

Further, in regard to claims 112-114, as shown in Figs. 6 and 8, while the gas jets (81) are initially shown directed at an angle of approximately 90 degrees, prior to striking the surface of the food product the angle of the gas jet is shown at an angle of less than 90 degrees from horizontal thus meeting applicant's claim limitations. Alternatively, the embodiment of Smith's invention shown in Figs. 12-18 shows plates (385) with air jets (390) that are oriented at an angle

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and thus less than 90 degrees from horizontal in order to form an area of coverage that overlaps to progressively cook the entire surface of food product (P) (see col. 14, lines 31-34). It would be obvious to a person of ordinary skill in the art to incorporate the angled air injection of the second embodiment of Smith in the first embodiment to desirable form this area coverage that overlaps to progressively cook the entire surface of food product (P).

In regard to at least claim 115, again note the velocity range of 500 to 7,000 feet per minute (see col. 9, lines 5-6).

In regard to at least claim 116, as shown at least in Fig. 7, the opening at the top right side of the combustion chamber receiving exhaust air is considered an opening at the top of the cooking chamber as recited.

Hurley teaches a cooking method in the same field of endeavor as both applicant's invention and Smith. In Hurley, a cooking oven functions to provide convective and microwave heating (see abstract). The microwave heating is enabled by multiple microwave generating magnetrons (12 and 14) that are desirably arranged "at opposite ends of the cooking chamber" (see col. 5, lines 54-55) to direct microwave energy (15) to a food product.

Therefore, in regard to claims 110-116, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the cooking method of Smith to incorporate directing microwave energy at opposite sides of the cooking chamber as taught in Hurley as this location is expressly recognized in the art as desirable for directing microwave energy to a food product (see Hurley, col. 5, lines 47-55).

*Response to Arguments*

6. Applicant's arguments filed July 11, 2007 have been carefully considered but they are not persuasive.

Applicant first argues that Smith teaches away from turbulently colliding airflows. Applicant asserts that the disclosure in Smith of discrete columnated jets suggests that Smith views colliding air flows as undesirable. The examiner respectfully disagrees.

In response, the examiner notes that Smith unambiguously provides that the heated air provided, for example, by the air jets (81a, 81b, 81c), strikes the surface of a food product (P) "to provide very rapid heat transfer and very rapid water vapor removal from the surface of the product" (see Smith, col. 10, lines 47-49). As shown at least in Fig. 8, the jet flows (at least 81b and 81c), are illustrated as striking one another at or above the surface of the food product. As noted in the segment of this figure reproduced above by the examiner, the contact of these flows is considered to be "turbulently colliding" as recited in applicant's claim.

The examiner further notes that the air jets (81a, 81b, 81c) shown at least in Fig. 8 appear to be the air jets that are adjacent one another **within a single column**. For example, as shown in Fig. 3 of Smith, the air jets provided from the tubes (90 in Fig. 3) are adjacent one another in each curved column of air jets. While the air in between the separate columns is not intended to contact one another in order to form a path for return air (as noted by applicant, see response, pp. 8-9), the examiner considers that the air jets within each individual column "turbulently collide" with one another (as illustrated in Fig. 8 of Smith) to provide for the "very rapid heat transfer and very rapid water removal" noted in Smith.

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Applicant also argues that the “turbulent mushroom shaped pressure area” described in Smith (see col. 11, lines 6-10) does not suggest airflows that are turbulently colliding as claimed. The examiner respectfully disagrees.

In response, the examiner notes that as illustrated in at least Fig. 6 and 8, the jet flows of air (81) are forcefully directed to impinge upon the surfaces of the food product. As described above, the air jets serve provide rapid heat transfer and water removal from the food product. As illustrated at least in Fig. 8, the air flow from individual jets (81) collide with one another at or above the food product. The disclosure of the “turbulent mushroom shaped pressure area” in Smith only serves to emphasize that the jets of air at the surface of the food product are not properly regarded as laminar, but instead are reasonably construed as turbulent flows that turbulently collide within the “turbulent mushroom shaped pressure area” described in Smith. Therefore, contrary to applicant’s assertion, the turbulent collision of airflows shown and described in Smith does not produce an inoperable device (see applicant’s response, pp. 12-13).

Applicant also argues that Smith does not suggest a variable speed motor as recited in applicant’s claims. The examiner respectfully disagrees.

In response, the examiner notes that Smith unambiguously describes that the means (30) for forming the heat jets of air (81) is a “variable speed motor” (see col. 6, lines 4-9). Further, Smith also unambiguously provides that the optimum speed of the jets is selected based on a variety of factors and may be selected within a range such as between 500 to 7,000 feet per minute (see Smith, col. 9, lines 5-15). Accordingly, contrary to applicant’s assertion, Smith suggest a variable speed motor as recited.

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Applicant also indicates that he has searched column 9 and cannot find any reference to optimization or adjusting of the air jets (see response, p. 15).

In response, the following segment of col. 9 of Smith is provided for applicant's benefit:

Jets 81 preferably have a velocity in a range between 500 and 7,000 feet per minute and as illustrated in Figure VI directed substantially perpendicular to the surface of the product such that the jets impinge against the surface. The optimum velocity of jets 81 will vary depending upon a particular application. Factors determining the velocity of the jets include the temperature of air delivered from plenum 35, the size of the average portion of product to be cooked, the nature of the product being cooked, the particular size of the product being heated and the like. 15

(Smith, col. 9, lines 5-15)

Applicant also argues that the chambers that are located above the plates (82 and 122) illustrated in Figs. 2 and 8 are conduits as recited. The examiner respectfully disagrees.

In response, the examiner notes that these chambers in Smith serve the identical function and include the identical recited structure as the conduits of applicant's invention in directing air through plates to provide jets within the cooking chamber.

Applicant further argues that the gas of Smith is not directed at an angle of less than 90 degrees as recited in applicant's claims. The examiner respectfully disagrees.

In response, the examiner notes that applicant does not claim that the nozzles themselves are oriented at an angle less than 90 degrees. Rather, applicant's claims describe the angle of the heated gas itself. As shown at least in Figs. 6 and 8 of Smith, while the gas is initially directed at what appears to be an angle of 90 degrees, prior to striking the food product, the food product,

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the heated gas flows are angled at an angle of less than 90 degrees as recited (see the illustrated arrows showing the air flow in Figs. 6 and 8), thus meeting applicant's recitations of the angle of the heated gas.

Applicant also argues that Smith does not suggest the heated gas velocities of applicant's claims, namely 2000 feet per minute (claim 115). The examiner respectfully disagrees.

In response, the examiner notes that Smith unambiguously describes that the velocity range of the heated air jets (81) is between 500 and 7,000 feet per minute (see Smith, col. 9, lines 5-6). This disclosure clearly and unambiguously includes applicant's recited velocity of 2000 feet per minute.

Applicant also appears to argue against the secondary reference of Hurley because "Hurley requires stirrers in order to propagate microwave energy through the cooking chamber" and that applicant's invention does not require a stirring mechanism (see response, p. 18).

In response, the examiner notes that it has been held that in determining whether claims are patentable in view of combination and modification of prior patents, the proper inquiry should not be limited to the specific structure shown by a reference, but should be into the concepts fairly contained therein, with the overriding question to be determined being whether those concepts would have suggested to one skilled in the art the modification called for by the claims. See *In re Bascom*, 230 F.2d 612, 614, 109 USPQ 98, 100 (CCPA 1956). Further, under 35 U.S.C. § 103, a reference must be considered not only for what it expressly teaches, but also for what it fairly suggests (*In re Burckel*, 592 F.2d 1175, 1179, 201 USPQ 67, 70 (CCPA 1979); *In re Lamberti*, 545 F.2d 745, 750, 192 USPQ 278, 280 (CCPA 1976)), as well as the reasonable

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inferences which the artisan would logically draw from the reference. See *In re Shepard*, 319 F.2d 194, 197, 138 USPQ 148, 150 (CCPA 1963).

In this case, Hurley is not relied upon for any suggestion of a stirring mechanism. Hurley is merely relied upon for a showing in the art of locating microwave generating means (12 and 14) that are desirably arranged "at opposite ends of the cooking chamber" (see col. 5, lines 54-55) to direct microwave energy (15) to a food product as recited in applicant's claims. This teaching in Hurley of the location of microwave generating means for cooking a food product would reasonably and fairly suggest such a location for the microwave generating means of Smith to a person of ordinary skill in the art.

Accordingly, while applicant's arguments have been carefully considered, they are not persuasive. Applicant's claims are not considered to patentably distinguish applicant's invention over the prior art of record.

### ***Conclusion***

7. This action is made non-final. A THREE (3) MONTH shortened statutory period for reply has been set. Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Josiah Cocks whose telephone number is (571) 272-4874. The examiner can normally be reached on M-F 8:00-5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven McAllister, can be reached (571) 272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jcc  
September 26, 2007

  
JOSIAH COCKS  
PRIMARY EXAMINER  
ART UNIT 3749